



Industrial Hygiene  
MAY 23 1990

# MATERIAL SAFETY DATA SHEET

PRODUCT NALCO 2590 MICROBIOCIDE

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

## SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCO 2590 MICROBIOCIDE

DESCRIPTION: Calcium hypochlorite

NFPA 704M/HMIS RATING: 1/1 HEALTH 0/0 FLAMMABILITY 2/2 REACTIVITY OXY OTHER  
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

## SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX.%
Calcium hypochlorite	7778-54-3	100

## SECTION 3 PRECAUTIONARY LABEL INFORMATION

**DANGER:** Highly corrosive. Causes skin and eye damage. May be fatal if swallowed. Do not get in eyes, on skin or on clothing. Do not handle with bare hands. Wear goggles or face shield and use rubber gloves or only thoroughly clean, dry utensils when handling. Irritating to nose and throat. Avoid breathing dust and fumes. Remove and wash contaminated clothing before reuse.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

## SECTION 4 FIRST AID INFORMATION

**EYES:** Immediately flush for at least 15 minutes while holding eyelids open. Call a physician at once.

**SKIN:** Immediately flush with water for at least 15 minutes. For a large splash, flood body under a shower. Call a physician at once.

**INGESTION:** Do not induce vomiting. Give water. Call a physician at once.

**INHALATION:** Remove to fresh air. Treat symptoms. Call a physician at once. If breathing has stopped, give cardiopulmonary resuscitation (CPR). Administer oxygen. Call a physician at once.

**NOTE TO PHYSICIAN:** No specific antidote is known. Based on the individual reactions of the patient, the physician's judgment should be



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## SECTION 4 FIRST AID INFORMATION

( CONTINUED )

used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

## SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT: Corrosive to the eyes with possible permanent damage depending on the length of exposure and on the first aid action given.

SKIN CONTACT: Corrosive to the skin, possibly resulting in third degree burns depending on the length of exposure and on the first aid action given.

INGESTION: Can be fatal.

INHALATION: Can be corrosive to the mucous membranes and the lungs.

SYMPTOMS OF EXPOSURE:

ACUTE: Severe irritation or burning of skin, eyes and mucous membranes.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

## SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have not been conducted on this product, but toxicity studies of the ingredient(s) in Section 2 have been reviewed. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS):

Calcium hypochlorite LD<sub>50</sub> = 850 mg/kg

## SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: White

FORM: Pellet

ODOR: Chlorine

BULK DENSITY:

118.6 lbs/ft<sup>3</sup>

SOLUBILITY IN WATER:

Completely

pH (at 1%) =

10.5 - 11.5

ASTM E-70



# MATERIAL SAFETY DATA SHEET

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## SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

( CONTINUED )

FLASH POINT: Not applicable

NOTE: These physical properties are typical values for this product.

## SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: Not applicable

EXTINGUISHING MEDIA: Not combustible, but may cause violent spontaneous ignition if contaminated with organic matter. Flood with water to keep fire exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve chlorine.

## SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid contact with organic materials (eg. rags, sawdust, hydrocarbon oils or solvents) and avoid reducing agents (eg. hydrazine, sulfites, sulfides, aluminum or magnesium dust) which can generate heat, fires, explosions and the release of toxic fumes.

Avoid contact with strong acids (eg. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) which can cause violent spontaneous combustion.

Material is a strong oxidizer.

STORAGE: Store in cool, dry well ventilated place.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion HCl may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

## SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: If it is possible to generate dust, wear a NIOSH approved or equivalent dust respirator, (ANSI Z 88.2, 1980 for requirements and selection).

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

VENTILATION: Use general ventilation with local exhaust ventilation to



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## SECTION 10 PERSONAL PROTECTION EQUIPMENT

( CONTINUED )

maintain dust levels to within the TLV (see Section 14).

**PROTECTIVE EQUIPMENT:** Wear gloves, aprons or a slicker suit to avoid skin contact. Chemical goggles and face shield are also recommended (ANSI Z 87.1 requirements and selection of gloves, goggles, shoes, etc.). An eye wash fountain should be available.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

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## SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (708-920-1510)

### SPILL CONTROL AND RECOVERY:

**Solid spills:** Sweep or vacuum up and reclaim into recovery or salvage drums for disposal. Wear the protective equipment specified in Section 10. Refer to CERCLA in Section 14.

This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

**DISPOSAL:** If this product becomes a waste, it meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D001.

As a hazardous solid waste, it must be disposed of in a Hazardous Waste Treatment, Storage and Disposal facility in accordance with local, state and federal regulations.

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## SECTION 12 ENVIRONMENTAL INFORMATION

### AQUATIC DATA:

96 hour static acute LC<sub>50</sub> to Rainbow Trout = 0.023 ppm (as chlorine)

If released into the environment, see CERCLA in Section 14.

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## SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - CALCIUM HYPOCHLORITE MIXTURE, DRY  
OXIDIZER UN 1748



# MATERIAL SAFETY DATA SHEET

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## SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

### FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

Calcium hypochlorite - Corrosive

Chlorine = TWA 1 ppm ACGIH TLV

CERCLA/SUPERFUND, 40 CFR 117, 302:

This product contains calcium hypochlorite, a Reportable Quantity (RQ) substance and if 15 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D. C. (1-800-424-8802).

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986  
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):

This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS  
(40 CFR 370):

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- XX Immediate (acute) health hazard
- Delayed (chronic) health hazard
- XX Fire hazard
- Sudden release of pressure hazard
- Reactive hazard

Under Section 311, submittal of MSDS's or a list of product names to the local emergency planning commission, state emergency response commission and local fire department is required after October 17, 1987 if you have:

- 10,000 pounds or more of a hazardous substance, or
- 500 pounds or the threshold planning quantity, whichever



# MATERIAL SAFETY DATA SHEET

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## SECTION 14 REGULATORY INFORMATION

( CONTINUED )

is less, of an extremely hazardous substance.

After October 17, 1989, MSDS(s), or a list of product names for all hazardous substances between zero (0) and 10,000 pounds, not previously reported, must be submitted.

### SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):

This product does not contain ingredients (at a level of 1% or greater) on the List of Toxic Chemicals.

### TOXIC SUBSTANCES CONTROL ACT (TSCA):

This product is exempted under TSCA and the active ingredient is regulated under FIFRA. The inerts are on the Inventory List.

FEDERAL INSECTICIDE FUNGICIDE AND RODENTICIDE ACT (FIFRA), 7 USC 135: EPA Reg. No. 1258-974-1706.

This product is registered for use as a microorganism control chemical used in industrial recirculating cooling water tower systems and cooling ponds and reservoirs.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D: If this product becomes a waste, it does meet the criteria of a hazardous waste as defined under RCRA 40 CFR 261 (consult Section 11).

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):

This product contains the following ingredient(s) covered by the Clean Water Act:

Calcium hypochlorite - Section 311

CLEAN AIR ACT, 40 CFR 60, SECTION 111, 40 CFR 61, SECTION 112:

This product does not contain ingredients covered by the Clean Air Act.

### STATE REGULATIONS:

#### CALIFORNIA PROPOSITION 65:

This product complies with the MSDS and labeling requirements of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

#### MICHIGAN CRITICAL MATERIALS:

This product contains the following substance(s) identified on the



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## SECTION 14 REGULATORY INFORMATION

( CONTINUED )

Michigan Critical Materials Register:

Hypochlorite compounds

STATE RIGHT TO KNOW LAWS:

Regulated in those states using the TLV for calcium hypochlorite as a criteria for listing.

## SECTION 15 ADDITIONAL INFORMATION

None

## SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

## SECTION 17 BIBLIOGRAPHY

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services, Public Health Service, PB 33-135855, 1983.

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## SECTION 17 BIBLIOGRAPHY

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Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.

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